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Mental Health and Mental Disorders

Co-lead Agencies: National Institutes of Health; Substance Abuse and Mental Health Services Administration

Contents

Goal

Improve mental health and ensure access to appropriate, quality mental health services.

Overview

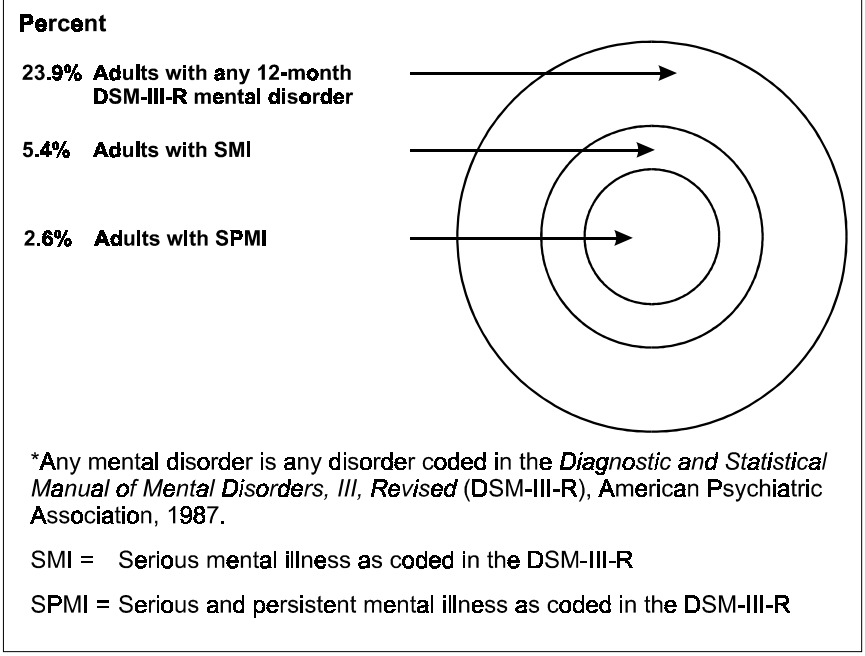
Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity. Mental health is indispensable to personal well-being, family and interpersonal relationships, and contribution to community or society. *Mental illness* is the term that refers collectively to all diagnosable mental disorders. *Mental disorders* are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof), which are associated with distress and/or impaired functioning and spawn a host of human problems that may include disability, pain, or death.

Issues

Mental disorders generate an immense public health burden of disability. The World Health Organization, in collaboration with the World Bank and Harvard University, has determined the "burden of disability" associated with the whole range of diseases and health conditions suffered by peoples throughout the world. A striking finding of the landmark *Global Burden of Disease* study is that the impact of mental illness on overall health and productivity in the United States and throughout the world often is profoundly under-recognized. Today, in established market economies such as the United States, mental illness is on a par with heart disease and cancer as a cause of disability.[1] Suicide—a major public health problem in the United States—occurs most frequently as a consequence of a mental disorder.

Mental disorders occur across the lifespan, affecting persons of all racial and ethnic groups, both sexes, and all educational and socioeconomic groups. Approximately 40 million Americans aged 18 to 64 years, or 22 percent of the population, had a diagnosis of mental disorder alone (19 percent) or of a co-occurring mental and addictive disorder (3 percent) in the past year.[2, 3, 4] At least one in five children and adolescents between ages 9 and 17 has a diagnosable mental disorder in a given year.[5] Mental and behavioral disorders and serious emotional disturbances (SEDs) in children and adolescents can lead to school failure, alcohol or illicit drug use, violence, or suicide.[6, 7, 8] About 5 percent of children and adolescents are extremely impaired by mental, behavioral, and emotional disorders.[9] In later life, the majority of Americans aged 65 years and older cope constructively with the changes associated with aging and maintain mental health, yet an estimated 25

Proportion of Adults Aged 18 Years and Older With Mental Illness (By level of severity*)



*Any mental disorder is any disorder coded in the *Diagnostic and Statistical Manual of Mental Disorders, III, Revised* (DSM-III-R), American Psychiatric Association, 1987.

SMI = Serious mental illness as coded in the DSM-III-R

SPMI = Serious and persistent mental illness as coded in the DSM-III-R

Source: Kessler, R.C.; Berglund, P.A.; Zbao, S.; Leaf, P.J.; Kouzis, A.C.; Bruce, M.L.; Friedman, R.M.; Grossier, R.C.; Kennedy, C.; Narrow, W.E.; Kuehnel, T.G.; Laska, E.M.; Manderscheid, R.W.; Rosenheck, R.A.; Santori, T.W.; and Schneier, M. The 12-month prevalence and correlates of serious mental illness *Mental Health, United States, 1998*. DHHS Publication Number (SMA) 99-8235. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, 1999.

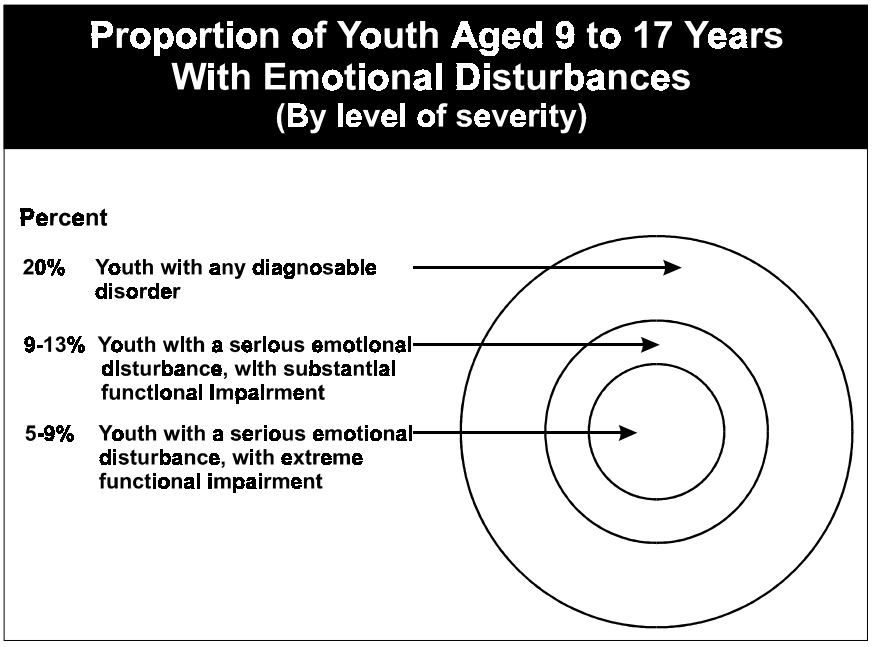
percent of older people (8.6 million) experience specific mental disorders, such as depression, anxiety, substance abuse, and dementia, that are not part of normal aging. Alzheimer's disease strikes 8 to 15 percent of people over age 65,[10] with the number of cases in the population doubling every 5 years of age after age 60. Alzheimer's disease is thought to be responsible for 60 to 70 percent of all cases of dementia and is one of the leading causes of nursing home placements.[11]

Mental disorders vary in severity and in their impact on people's lives. Mental disorders—such as schizophrenia, major depression and manic depressive or bipolar illness, and obsessive-compulsive disorder and panic disorder—can be enormously disabling.

- *Schizophrenia* will affect more than 2 million Americans in one year.[3] The disorder tends to follow a long-term course, although the severity of symptoms may wax and wane. With modern treatments, increasing numbers of persons with schizophrenia can and do view recovery as an achievable goal.

- *Affective disorders*, which encompass major depression and manic depressive illness, constitute a second category of severe mental illness. The World Health Organization found major depression to be the leading cause of disability among adults in developed nations such as the United States.[1] About 6.5 percent of women, and 3.3 percent of men will have major depression in any year. Manic depressive illness affects around 1 percent of adults, with comparable rates of occurrence in men and women. A high rate of suicide is associated with such mood disorders.[12]

- *Anxiety disorders* encompass several discrete conditions, including panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, and phobia. More common than other mental disorders, anxiety disorders affect as many as 19 million Americans annually.[13]



Source: Friedman, R.M.; Katz-Leavy, J.W.; Manderscheid, R.W.; and Sondheimer, D.L. Prevalence of serious emotional disturbance: An Update. *Mental Health, United States, 1996*. DHHS Publication Number (SMA) 96-3098. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, 1996.

Modern treatments for mental disorders are highly effective, with a variety of treatment options available for most disorders; there is no "one size fits all" treatment. Similarly, there exists today a diverse array of treatment settings, and a person may have the option of selecting a setting based on health care coverage, the clinical needs associated with a particular type or stage of illness, and personal preference.

Prevention scientists have developed, tested, and structured preventive interventions against depression, conduct disorder, and other adverse outcomes in high-risk groups of children. When applied with fidelity, preventive interventions can decrease risk of onset or delay onset of a disorder.

Rates for the most severe forms of mental disorders have been estimated to be between 2.6 and 2.8 percent of adults aged 18 and over during any one year.[13, 14] Despite the effectiveness of treatment and the many paths to obtaining a treatment of choice, only 25 percent of persons with a mental disorder obtain help for their illness in the health care system. In comparison, 60 to 80 percent of persons with heart disease seek and receive care.[15] More critically, 40 percent of all Americans who have a severe mental illness do not seek treatment from either general medical or specialty mental health providers. Indeed, the majority of persons with mental disorders do not receive mental health services. Of those aged 18 years and over getting help, about 15 percent receive help from mental health specialists.[3] Of young people aged 9 to 17 years who have a mental disorder, 27 percent receive treatment in the health sector.[16] However, an additional 20 percent of children and adolescents with mental disorders use mental health services only in their schools.[19]

The direct costs of diagnosing and treating mental disorders totaled approximately $69 billion[17] in 1996. Lost productivity and disability insurance payments due to illness or premature death accounted for an additional $74.9 billion.[17] Crime, criminal justice costs, and property loss contributed another $6 billion to the total cost of mental illness. People with mental illnesses are overrepresented in jail populations; many do not receive treatment.[85] Of the $69 billion spent for diagnosing and treating mental disorders, nearly 70 percent was for the services of mental health specialty providers, with most of the remainder for general medical services providers. The majority—53 percent—of mental health treatment was paid for by public sector sources, including the States and local governments, as well as Medicaid and Medicare and other Federal programs; 47 percent of expenditures were from private sources. Of expenditures from private sources, almost 60 percent were from private insurance.[17] The remainder came from out-of-pocket payments, including insurance copayments, with a small amount from sources such as foundations.

Trends

Research on the brain and behavior in mental illness and mental health is moving at a rapid pace. An increasingly strong consumers' movement in the mental health field is adding urgency to the tasks of translating new knowledge into clinical practices and refining service delivery systems to use new and emerging information optimally for patient/consumer needs. Consumer and family organizations, which formed out of concern over frequent fragmentation of mental health services and lack of accessibility to such services, have assumed a substantial role in supporting development of mental health services. Diverse groups share overlap-

ping goals, including overcoming stigma and preventing discrimination toward persons with mental illness, promoting self-help groups, and promoting recovery from mental illness.[18]

The co-occurrence of addictive disorders among persons with mental disorders is gaining increasing attention from mental health professionals. Among adults aged 18 years and older with a lifetime history of any mental disorder, 29 percent have a history of an addictive disorder; of those with an alcohol disorder, 37 percent have had a mental disorder; and among those with other drug disorders, 53 percent have had a mental disorder.[17] Having both mental and addictive disorders within the same year is a particularly significant clinical treatment issue, complicating treatment for each disorder. About 3 percent of the population aged 18 years and older has been identified as having co-occurring mental and addictive disorders in 1 year.[3, 14] Of those with a serious mental illness, 15 percent have both types of disorder in one year, and of those with a severe and persistent mental illness, 27 percent have both mental and addictive disorders.[14] Co-occurring, or comorbid, mental and addictive disorders are estimated to affect 50 to 60 percent of homeless persons.[20] Comorbid mental and addictive disorders also are evident in children and adolescents.[21] Especially at risk for alcohol use problems are boys diagnosed with so-called externalizing disorders such as conduct problems, oppositional-defiant disorder, and attention deficit/hyperactivity disorder (ADHD).[22] From public health promotion and disease prevention perspectives, it is noteworthy that children and adolescents with mental illnesses often do not become substance abusers until after the mental illness becomes apparent.[23] This time lag creates a window of opportunity when prevention of substance abuse in these children may be possible.[21]

As the life expectancy of Americans continues to grow longer, the sheer number—although not necessarily the proportion—of persons experiencing mental disorders of late life will expand. This trend will present society with unprecedented challenges in organizing, financing, and delivering effective preventive and treatment services for mental health in this population. As recognition continues to grow that depression and certain cognitive losses are treatable disorders and not inevitable concomitants of aging, diagnostic precision in later life and provision of targeted treatment are increasingly urgent.

Health care in the U.S. continues to undergo fundamental structural changes that require creative and flexible responses from service providers, administrators, researchers, and policymakers alike. Two prominent forces of change are Federal and State efforts to improve access to health care, including mental health care, and the rapid growth and impact of managed care. In 1998, the Mental Health Parity Act (P.L. 104-204) was implemented to help increase access to care. Although the Federal Mental Health Parity Act is quite limited in reducing insurance coverage discrepancies between physical and mental disorders, 53 percent of the U.S. population is now covered by State mental health parity laws. The term “par-

ity" or "mental health parity" refers generally to insurance coverage for mental health services that includes the same benefits and restrictions as coverage for other health services.

Disparities

Although mental illnesses, for the most part, are equal opportunity disorders, there are some marked differences in how they present themselves and how they are prevented, diagnosed, and treated by gender, racial and ethnic group, and age.[17]

Differences between men and women are evident in the number of cases of particular mental disorders. For example, major depression affects approximately twice as many women as men.[24] Women who are poor, have little formal schooling, and are on welfare or are unemployed are more likely to experience depression than women in the general population. Anxiety, panic, and phobic disorders affect two to three times as many women as men.[25, 26, 27]

Risk for engaging in suicidal behaviors also differs by gender. A history of physical or sexual abuse appears to be a serious risk factor for suicide attempts in both women and men.[28, 29] Women attempt suicide more often than men,[30] but men's risk of completed suicide is on average 4.5 times higher than women's.[31] This suicide gender gap begins in adolescence and grows through middle and later life.[32]

Specific mental disorders affect men and women at particular stages of life. Schizophrenia occurs more often in young men than in women and usually has its onset in the late teen and early adult years. Eating disorders, affecting up to 2 percent of the population, arise predominantly—but not exclusively—in adolescent and young adult women (90 percent of all cases); the median age of onset is 17 years.[2] Eating disorders often persist into adulthood and have among the highest death rates of any mental disorder.[33] Alzheimer's disease affects equal numbers of women and men, although women's longer average life spans mean that more women than men have Alzheimer's disease at any point in time.[34]

Mental disorders, in aggregate, are as common later in life as they are at other ages, although rates for specific mental disorders vary depending on age and gender.[35] In any 1-year period, the number of cases of major depression in persons aged 65 years and older is approximately 1 percent, which is about half the rate among persons aged 45 to 64 years.[36] Depression rates are much higher, however, among older Americans who experience a physical health problem—12 percent for persons hospitalized for problems such as hip fractures or heart disease.[37] Depression rates for older persons in nursing homes range from 15 to 25 percent.[38] The number of cases of dementias, such as Alzheimer's disease and other severe losses of mental abilities, are as high as 12 percent among persons aged 65 years and older.[39] By age 85 years, the rate grows to 25 percent.[40]

In contrast, rates of primary psychotic disorders drop with age;[41] thus, schizophrenia and persistent paranoid disorders affect fewer than 0.5 percent of older

adults.[42] Although fewer old persons attempt suicide than do young persons,[43] the rate of completed suicide is highest among elderly men, who account for about 80 percent of suicides among persons aged 65 years and older.[44] Moreover, elderly white men have a suicide rate six times the national average.[45]

Caution is needed, however, when discussing differences among racial and ethnic groups in the rates of mental illness. Studies of the number of cases of mental health problems among ethnic

and racial populations, while increasing in number, remain limited and often inconclusive. Discussion of the rates of existing cases must consider differences in how persons of different cultures and racial groups perceive mental illness. Behavioral problems that Western medicine views as signs of mental illness may be assessed differently by individuals in various ethnic and racial groups. With this caution in mind, along with the recognition that sample sizes for ethnic and racial groups may be limited, examination of existing large-scale studies for mental health trends among ethnic and racial groups of Americans remains important.

Mental disorders are not only the cause of limitations of various life activities but also can be a secondary problem among people with other disabilities. Depression and anxiety, for example, are seen more frequently among people with disabilities than those without disabilities.[46]

Opportunities

Promising universal and targeted preventive interventions, implemented according to scientific recommendations, have great potential to reduce the risk for mental disorders and the burden of suffering in vulnerable populations. Also, social and behavioral research is beginning to explore the concept of *resilience* to identify strengths that may promote health and healing. It is generally assumed that resilience involves the interaction of biological, psychological, and environmental processes. With increased understanding of how to identify and promote resilience, it will be possible to design effective programs that draw on such internal capacity.

There is increasing awareness and concern in the public health sector regarding the impact of stress, its prevention and treatment, and the need for enhanced coping skills. Stress may be experienced by any person and provides a clear demonstration of mind-body interaction. Coping skills, acquired throughout the lifespan, are positive adaptations that affect the ability to manage stressful events. Additional research can help quantify the public health burden of stress and identify ways to prevent or alleviate it through environmental or individual strategies.

Progress in fundamental science and an emphasis on translating new knowledge into clinical applications can strengthen opportunities for future clinical and service system innovations. Research-based treatments afford an unprecedented

opportunity to achieve a major reduction in the burden of disease associated with mental illness. With enhancements of clinical services and service systems, recovery is an achievable objective of mental health clinical interventions.

Evidence that mental disorders are legitimate and highly responsive to appropriate treatment promises to be a potent antidote to stigma. Stigma creates barriers to providing and receiving competent and effective mental health treatment and can lead to inappropriate treatment, unemployment, and homelessness. The elimination of stigma associated with mental disorders will in turn encourage more individuals to seek needed mental health care.

Interim Progress Toward Year 2000 Objectives

Four Healthy People 2000 objectives focus on individual behavior in coping with the symptoms of mental disorders: controlling stress, seeking help with personal and emotional problems, obtaining treatment for depression, and using community support programs for severe and persistent disorders. The least progress was achieved on objectives indicative of chronic stress exposure; that is, controlling stress and seeking treatment for depression showed the least progress. Objectives that involve seeking help for personal and emotional problems that result from disabilities, particularly those associated with severe and persistent mental disorders, showed the most progress. Five Healthy People 2000 objectives focus on the development of service delivery mechanisms for early recognition of symptoms and interventions, as well as reductions in the negative consequences of mental disorders. A slight decline in the proportion of nurse practitioners who typically inquire about the parent-child relationship has been documented (from 55 percent to 51 percent). In addition, large declines have taken place in nurse practitioners who typically inquire about their adult patients' cognitive, emotional, or behavioral functioning (from 35 percent to 19 percent for cognitive functioning and from 40 percent to 26 percent, emotional or behavioral functioning). Some offsetting increases in treatment and referral activity are reported (from 20 percent to 22 percent for cognitive problems, from 23 percent to 33 percent for emotional/behavioral problems).

Six Healthy People 2000 objectives focus on the distress and dysfunction that accompany the cognitive, emotional, and behavioral symptoms of mental disorders. The age-adjusted suicide rate in the total population has slightly declined and by 1997 already had met the target level; white men aged 65 and older began the decade at highest risk for suicide (44.4), had declined below year 2000 target in 1994 (38.9) and had declined further by 1997 to 35.5.

Note: Unless otherwise noted, data are from Centers for Disease Control and Prevention, National Center for Health Statistics, *Healthy People 2000 Review 1998-99.*

Mental Health and Mental Disorders

Goal: Improve mental health and ensure access to appropriate, quality mental health services

Number	Objective
Mental Health Status Improvement	
18-1	Suicide
18-2	Adolescent suicide attempts
18-3	Serious mental illness (SMI) among homeless adults
18-4	Employment of persons with SMI
18-5	Eating disorder relapses
Treatment Expansion	
18-6	Primary care screening and assessment
18-7	Treatment for children with mental health problems
18-8	Juvenile justice facility screening
18-9	Treatment for adults with mental disorders
18-10	Treatment for co-occurring disorders
18-11	Adult jail diversion
State Activities	
18-12	State tracking of consumer satisfaction
18-13	State plans addressing cultural competence
18-14	State plans addressing elderly persons

Mental Health Status Improvement

18-1. Reduce the suicide rate.

Target: 6.0 suicide deaths per 100,000 population.

Baseline: 10.8 suicide deaths per 100,000 population in 1998 (preliminary data; age adjusted to the year 2000 standard population).

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Total Population, 1997*	**Suicide** Rate per 100,000
TOTAL	11.4
Race and ethnicity	
American Indian or Alaska Native	12.4
Asian or Pacific Islander	7.0
Asian	DSU
Native Hawaiian and other Pacific Islander	DSU
Black or African American	6.3
White	12.3
Hispanic or Latino	6.4
Not Hispanic or Latino	11.9
Black or African American	6.5
White	12.8
Gender	
Female	4.4
Male	19.4
Education level (aged 25 to 64 years)	
Less than high school	18.4
High school graduate	18.9
At least some college	10.2

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.
*New data for population groups will be added when available.

18-2. Reduce the rate of suicide attempts by adolescents.

Target: 12-month average of 1 percent.

Baseline: 12-month average of 2.6 percent among adolescents in grades 9 through 12 in 1997.

Target setting method: Better than the best.

Data source: Youth Risk Behavior Survey (YRBS), CDC, NCCDPHP.

Students in Grades 9 Through 12, 1997	Suicide Attempts Percent
TOTAL	2.6
Race and ethnicity	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	DSU
Asian	DSU
Native Hawaiian and other Pacific Islander	DSU
Black or African American	DNC
White	DNC
Hispanic or Latino	2.8
Not Hispanic or Latino	DNA
Black or African American	2.4
White	2.0
Gender	
Female	3.3
Male	2.0
Family income level	
Poor	DNA
Near poor	DNA
Middle/high income	DNA

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

Suicide is a complex behavior that can be prevented in many cases by early recognition and treatment of mental disorders. It was the ninth leading cause of death in the U.S. in 1996 and the third leading killer of young persons between the ages of 15 and 24.[47, 48, 49, 50] At least 90 percent of all people who kill themselves have a

mental or substance abuse disorder, or a combination of disorders. However, most persons with a mental or substance abuse disorder do not kill themselves, thus other factors contribute to suicide risk. In addition to mental and substance abuse disorders, risk factors include prior suicide attempt, stressful life events, and access to lethal suicide methods. Suicide is difficult to predict; therefore, preventive interventions focus on risk factors. Thus, reduction in access to lethal methods and recognition and treatment of mental and substance abuse disorders are among the most promising approaches to suicide prevention. More targeted approaches should consider risk factors most salient and appropriate for select populations.

18-3. Reduce the proportion of homeless adults who have serious mental illness (SMI).

Target: 19 percent.

Baseline: 25 percent of homeless adults aged 18 years and older had SMI in 1996.

Target setting method: 24 percent improvement.

Data source: Projects for Assistance in Transition from Homelessness (PATH) Annual Application, SAMHSA, CMHS.

Data for population groups currently are not collected.

Approximately one-quarter of homeless persons in the United States have a serious mental illness (SMI).[51] New approaches developed over the past 10 years provide ways to lower the number of persons who are homeless who also have SMI. Using persistent patient outreach and engagement strategies, service providers are helping homeless persons with SMI connect with mainstream treatment systems.[52, 53]

Treatment alone, however, is not enough. Once permanent housing is located, appropriate mental health and social supports can help persons with mental illness remain off the street. Much of this support occurs in the form of case management, particularly if it is responsive both to emerging mental health issues and to the skills a person needs to function and thrive in the community.

18-4. Increase the proportion of persons with serious mental illnesses who are employed.

Target: 51 percent.

Baseline: 42 percent of persons aged 18 years and older with serious mental illnesses were employed in 1994.

Target setting method: 21 percent improvement.

Data source: National Health Interview Survey (NHIS), CDC, NCHS.

Data for population groups currently are not analyzed.

Rehabilitation is an essential part of care for adults with severe mental illness. To promote independent living, rehabilitation programs often evaluate and place these persons in jobs. Rehabilitation programs also provide continuing support and help ensure that the placement is working well. Research shows that working provides both economic and personal benefits for persons with SMI that extend beyond a paycheck and workplace companionship.[54] Employment also improves self-esteem and independence; it helps a person to manage his or her own illness and return to community life.[55, 56] A majority of persons with SMI want to be employed and rank employment as a primary personal goal.[57] Helping persons with mental illness secure employment can reduce the use of mental health services and reduce the number of persons who receive Federal and State disability payments.[57]

18-5. (Developmental) Reduce the relapse rates for persons with eating disorders including anorexia nervosa and bulimia nervosa.

Potential data source: Prospective studies of patients with anorexia or bulimia nervosa, NIH, NIMH.

Anorexia nervosa is the most severe eating disorder, characterized by extreme and often life-threatening[58] weight loss associated with a distorted body image and a pathological fear of gaining weight. In cases of severe weight loss, hospital treatment often is needed. Studies suggest that from 30 to 50 percent of patients treated successfully in the hospital become ill again within 1 year of leaving the hospital.[59, 60] Efforts are underway to develop and test specific interventions that can prevent relapse in these patients. For instance, a particular kind of psychotherapy—called cognitive-behavioral treatment—has been found to lower relapse rates in persons with anorexia nervosa.[61] Treatments using medications also have been tried, both alone and in combination with "talking" therapy (unpublished data). Preliminary reports suggest that it might be possible to decrease the chance of relapse, resulting in better long-term prospects for persons with severe anorexia nervosa.

Bulimia nervosa is an eating disorder that involves eating a lot of food (binge eating) and then eliminating it (purging), whether through self-induced vomiting or through the use of diuretics or other medications. Effective short-term treatments exist for this serious mental health problem. When "remission" is defined as being symptom-free of binge eating and purging for at least 4 weeks, about 25 percent of those in remission had a relapse in less than 3 months. Around 9 months after remission, fewer than half (49 percent) of the persons remained symptom-free.[62] Risk for relapse seems to drop after 4 years of being symptom free.[63]

Treatment Expansion

18-6. (Developmental) Increase the number of persons seen in primary health care who receive mental health screening and assessment.

Potential data source: Primary Care Data System/Federally Qualified Health Centers, HRSA.

The general medical/primary care sector consists of health care professionals such as internists, pediatricians, and nurse practitioners in office-based practice, clinics, acute medical/surgical hospitals, and nursing homes. Close to 6 percent of the adult U.S. population use the general medical sector for mental health care, with an average of about 4 mental health visits per year—far lower than the average of 14 visits per year found in the specialty medical sector. [3, 4] The general medical sector has long been identified as the initial point of contact for many adults with mental disorders; for some, these providers may be their only source of mental health services. This attention to mental state in primary care can promote early detection and intervention for mental health problems.

18-7. (Developmental) Increase the proportion of children with mental health problems who receive treatment.

Potential data source: National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS.

For many children aged 18 years and under, life-long mental disorders may start in childhood or adolescence. For many other children, normal development is disrupted by biological, environmental, and psychosocial factors, which impair their mental health, interfere with education and social interactions, and keep them from realizing their full potential as adults.

Expanding effective services for children, particularly for those with serious emotional disturbance, depends on promoting effective collaboration across critical areas of support: families, social services, health, mental health, juvenile justice, and schools. Better services and collaboration for children with serious emotional disturbance and their families will result in greater school retention, decreased

contact with the juvenile justice system, increased stability of living arrangements, and improved educational, emotional, and behavioral development.[64, 65]

18-8. (Developmental) Increase the proportion of juvenile justice facilities that screen new admissions for mental health problems.

Potential data source: Inventory of Mental Health Services in Juvenile Justice Facilities, SAMHSA.

Each year, over 100,000 youths are placed in juvenile justice facilities.[66] Although exact numbers of youths with mental disorders among those entering this system are not available, the proportion is considerably higher than in the general population. Not surprisingly, problems of suicide, self-injurious behavior, and other disorders are significant among youths in the juvenile justice system.[67, 68] Screening activities, including parent or caregiver interviews, should be conducted by qualified mental health personnel.[67] This approach can help ensure that all youths entering the juvenile justice system who also have a treatable mental health problem are identified and receive appropriate treatment.

18-9. Increase the proportion of adults with mental disorders who receive treatment.

Target and baseline:

Objective	Increase in Adults With Mental Disorders Receiving Treatment	1997 Baseline (unless noted)	2010 Target
		Percent	
18-9a.	Adults aged 18 to 54 years with serious mental illness	47 (1991)	55
18-9b.	Adults aged 18 years and older with recognized depression	23	50
18-9c.	Adults aged 18 years and older with schizophrenia	60 (1984)	75
18-9d.	Adults aged 18 years and older with anxiety disorders	38	50

Target setting method: 17 percent improvement.

Data sources: Epidemiologic Catchment Area (ECA) Program, NIH, NIMH; National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS; Mental Health U.S., 1996, SAMHSA, CMHS.

Adults Aged 18 Years and Older Who Received Treatment for Mental Disorders, 1997 (unless noted)	18-9a. Serious Mental Illness (18 to 54 years) (1991)	18-9b. Recognized Depression (1997)	18-9c. Schizo-phrenia (1984)	18-9d. Anxiety Disorders (1997)
	Percent			
TOTAL	47	23	60	38
Race and ethnicity				
American Indian or Alaska Native	DNA	DSU	DSU	DSU
Asian or Pacific Islander	DNA	DSU	DSU	DSU
Asian	DNA	DNC	DSU	DNC
Native Hawaiian and other Pacific Islander	DNA	DNC	DSU	DNC
Black or African American	DNA	16	DNC	26
White	DNA	24	DNC	39
Hispanic or Latino	DNA	20	42	DSU
Not Hispanic or Latino	DNA	DNC	DNC	40
Black or African American	DNA	DNA	41	DNA
White	DNA	DNA	63	DNA
Gender				
Female	DNA	24	63	32
Male	DNA	21	51	49
Education level				
Less than high school	DNA	22	48	48
High school graduate	DNA	19	71	34
At least some college	DNA	28	66	32

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

Serious mental illness. Untreated mental illnesses have human and economic costs associated with them.[68, 69, 70] Lost productivity due to illness, premature death, criminal justice interaction process, and property loss are all part of these costs. Ninety percent of those who complete suicide have a diagnosed mental illness.[3] Helping persons with mental illnesses access appropriate scientifically based treatments is essential.

Depression. At some time or another, virtually all adults will experience a tragic or unexpected loss or a serious setback and times of profound sadness, grief, or distress. Major depressive disorder, however, differs both *quantitatively* and

qualitatively from normal sadness or grief, which is typically less pervasive and generally more time-limited. Moreover, some of the symptoms of severe depression, such as anhedonia (the inability to experience pleasure), hopelessness, and loss of mood reactivity (the ability to feel a mood uplift in response to something positive) only rarely accompany normal sadness. Suicidal thoughts and psychotic symptoms such as delusions or hallucinations virtually always signify a pathological state. Depression disrupts the lives of depressed persons and their families and reduces economic productivity. Depression also can result in suicide and has an especially severe impact on women.[12, 24] Treatment can alleviate each of these problems. Available medications and psychological treatments, alone or in combination, can help 80 percent of those with depression.[72]

Depression also has a deleterious impact on the economy, costing the United States over $40 billion each year, both in diminished productivity and in use of health care resources. In the workplace, depression is a leading cause of absenteeism and diminished productivity.[73] Although only a minority seek professional help to relieve a mood disorder, depressed people are significantly more likely than others to visit a physician for some other reason.[4]

Schizophrenia is characterized by profound disruption in cognition and emotion, affecting the most fundamental human attributes: language, thought, perception, affect, and sense of self. Symptoms frequently include hearing internal voices or experiencing other sensations not connected to an obvious source (hallucinations) and assigning unusual significance or meaning to normal events or holding fixed false beliefs. No single symptom is definitive for diagnosis; rather, the diagnosis encompasses a pattern of signs and symptoms, in conjunction with impaired occupational or social functioning. The disorder affects 0.5 to 1 percent of the population over the course of a lifetime. Onset generally occurs during young adulthood (mid-20s for men, late-20s for women), although earlier and later onset do occur.[75]

Anxiety disorders are not only common in the United States, but they are ubiquitous across human cultures.[3, 4, 76] Twenty-four percent of the population will experience an anxiety disorder, many with overlapping substance abuse disorders.[19, 77, 78] The longitudinal course of anxiety disorders is characterized by relatively early ages of onset, chronicity, relapsing or recurrent episodes of illness, and periods of disability.[79, 80, 81, 82] Panic disorder and agoraphobia are associated with increased risks of attempted and completed suicide. [25, 83]

18-10. (Developmental) Increase the proportion of persons with co-occurring substance abuse and mental disorders who receive treatment for both disorders.

Potential data sources: National Health Interview Survey (NHIS), CDC, NCHS; National Household Survey on Drug Abuse (NHSDA), SAMHSA, OAS; Replication of National Comorbidity Survey, NIH, NIMH.

Co-occurring mental and addictive disorders are more common than previously recognized. In general, 19 percent of the adult U.S. population have a mental disorder alone (in 1 year); 3 percent have both mental and addictive disorders; and 6 percent have addictive disorders alone. Consequently, about 28 to 30 percent of the population have either a mental *or* addictive disorder.[3, 4] The *lifetime* rates of co-occurrence of mental disorders and addictive disorders are strikingly high. About one in five Americans experience a mental disorder in the course of a year. Nearly one in three adults who have a mental disorder in their lifetime also experiences a co-occurring substance abuse (alcohol or other drugs) disorder, which complicates treatment. Individuals with co-occurring disorders are more likely to experience a chronic course and to use services than are those with either type of disorder alone. Clinicians, program developers, and policymakers need to be aware of these high rates of comorbidity. While an integrated approach may be indicated for persons with serious mental illness and co-occurring addictive disorders, how public health service systems can best address issues of treating the full range of persons with co-occurring mental and substance-related disorders remains a challenge. Treatment protocols continue to be refined as research findings and promising practices are disseminated to programs and practitioners.

18-11. (Developmental) Increase the proportion of local governments with community-based jail diversion programs for adults with serious mental illnesses.

Potential data source: National Survey of Jail Mental Health Diversion Programs, SAMHSA.

Nearly 700,000 persons with active symptoms of severe mental illness are admitted to jails each year. They constitute about 7 percent of the jail population.[84] Individuals with SMI were over-represented in jails compared to their numbers in the general population. Some people arrested for nonviolent crimes could be better served if diverted from the jail system to a community-based mental health treatment program.[85] Key components of a model diversion program are: (1) identifying specific program elements for diversion with accompanying resources and identified staff, (2) a specific target population, (3) a goal of avoiding or decreasing the time of incarceration, and (4) a way to link target population members with community-based mental health services. [85]

State Activities

18-12. Increase the number of States and the District of Columbia that track consumers' satisfaction with the mental health services they receive.

Target: 30 States.

Baseline: 10 States in 1998.

Target setting method: 200 percent improvement.

Data source: Mental Health Statistics Improvement Program, SAMHSA.

The health care industry increasingly is using consumer opinion to gain information on service needs and changes. Patient satisfaction studies are becoming standard practice for many health care organizations. Health care executives have indicated that consumers have a major impact on the development of health care products.[86] Nearly 90 percent of health care executives reported that they have expanded both the number and type of services based on consumer preference. The Mental Health Statistics Improvement Program has pioneered the development of a consumer-oriented mental health report card that includes a consumer survey designed to address questions of access, appropriateness, quality, and outcome of care.

Rehabilitation is an essential part of care for adults with severe mental illness. To promote independent living, rehabilitation programs often evaluate and place these persons in jobs. Rehabilitation programs also provide continuing support and help ensure that the placement is working well. Research shows that working provides both economic and personal benefits for persons with SMI that extend beyond a paycheck and workplace companionship.[54] Employment also improves self-esteem and independence; it helps a person to manage his or her own illness and return to community life. [55, 56] A majority of persons with SMI want to be employed and rank employment as a primary personal goal.[57] Helping persons with mental illness secure employment can reduce the use of mental health services and reduce the number of persons who receive Federal and State disability payments. [57]

18-13. (Developmental) Increase the number of States, Territories, and the District of Columbia with an operational mental health plan that addresses cultural competence.

Potential data source: National Technical Assistance Center for State Mental Health Systems (NRI/NASMHPD), SAMHSA, CMHS.

To work effectively, health care providers need to understand the differences in how various populations in the United States perceive mental health and mental illness and treatment services. These factors affect whether people seek mental

health care, how they describe their symptoms, the duration of care, and the outcomes of the care received. Research has shown that various select populations use mental health services differently. They may not seek mental health services in the formal system, drop out of care, or seek care at much later stages of illness, driving the service cost higher.[87, 88, 89] This pattern of use appears to be the result of a community-based mental health service system that is not culturally relevant, responsive, or accessible to select populations.[89, 90, 91, 92] Hospitals have become the primary mental health treatment site for a disproportionate number of African Americans.[93, 94, 95, 96]

18-14. Increase the number of States, Territories, and the District of Columbia with an operational mental health plan that addresses mental health crisis interventions, ongoing screening, and treatment services for elderly persons.

Target: 50 States and the District of Columbia.

Baseline: 24 States.

Target setting method: Total coverage.

Data source: National Technical Assistance Center for State Mental Health Systems (NRI/NASMHPD), SAMHSA, CMHS.

The Nation is growing older; the number and proportion of the population aged 65 years and older will grow rapidly after 2010. As the Nation ages, the mental health needs of elderly persons must be addressed because their needs will continue to grow. Mood disorders affect between 2 and 4 percent of community-living elderly persons.[38] Older Americans with clinically significant depressive symptoms range from 10 to 15 percent of the population.[97] State mental health authorities and localities should become increasingly engaged in meeting the mental health needs of this growing population.

Related Objectives From Other Focus Areas

1. Access to Quality Health Services

1-1. Persons with health insurance
1-2. Health insurance coverage for clinical preventive services
1-3. Counseling about health behaviors
1-4. Source of ongoing care
1-5. Usual primary care provider
1-6. Difficulties or delays in obtaining needed health care
1-7. Core competencies in health provider training
1-8. Racial and ethnic representation in health professions
1-10. Delay or difficulty in getting emergency care
1-11. Rapid prehospital emergency care

1-12. Single toll-free number for poison control centers

1-13. Trauma care systems

1-14. Special needs of children

1-15. Long-term care services

2. Arthritis, Osteoporosis, and Chronic Back Conditions

2-4. Help in coping

3. Cancer

3-10. Provider counseling about preventive measures

6. Disability and Secondary Conditions

6-1. Standard definition of people with disabilities in data sets

6-2. Feelings and depression among children with disabilities

6-3. Feelings and depression interfering with activities among adults with disabilities

6-4. Social participation among adults with disabilities

6-5. Sufficient emotional support among adults with disabilities

6-6. Satisfaction with life among adults with disabilities

6-7. Congregate care of children and adults with disabilities

6-8. Employment parity

6-9. Children and youth with disabilities included in regular education programs

6-10. Accessibility of health and wellness programs

6-11. Assistive devices and technology

6-12. Environmental barriers affecting participation

6-13. Surveillance and health promotion programs

7. Educational and Community-Based Programs

7-1. High school completion

7-2. School health education

7-3. Health-risk behavior information for college and university students

7-4. School nurse-to-student ratio

7-5. Worksite health promotion programs

7-6. Participation in employer-sponsored health promotion activities

7-7. Patient and family education

7-9. Health care organization sponsorship of community health promotion activities

7-10. Community health promotion programs

7-11. Culturally appropriate community health promotion programs

7-12. Older adult participation in community health promotion activities

9. Family Planning

9-1. Intended pregnancy

9-2. Birth spacing

9-3. Contraceptive use

9-4. Contraceptive failure

9-5. Emergency contraception

9-6. Male involvement

9-7. Adolescent pregnancy

9-8. Abstinence before age 15 years

9-9. Abstinence among adolescents aged 15 to 17 years

9-10. Pregnancy prevention and sexually transmitted disease (STD) protection
9-11. Pregnancy prevention education
9-13. Insurance coverage for contraceptive supplies and services

11. Health Communication

11-1. Households with Internet access
11-2. Health literacy
11-3. Research and evaluation of communication programs
11-4. Quality of Internet health information sources
11-5. Centers for excellence
11-6. Satisfaction with providers' communications skills

13. HIV

13-1. New AIDS cases
13-5. New HIV cases
13-13. Treatment according to guidelines
13-17. Perinatally acquired HIV infection

15. Injury and Violence Prevention

15-10. Emergency department surveillance systems
15-11. Hospital discharge surveillance systems
15-12. Emergency department visits
15-33. Maltreatment and maltreatment fatalities of children
15-34. Physical assault by intimate partners
15-35. Rape or attempted rape
15-36. Sexual assault other than rape
15-37. Physical assaults
15-38. Physical fighting among adolescents
15-39. Weapon carrying by adolescents on school property

16. Maternal, Infant, and Child Health

16-2. Child deaths
16-3. Adolescent and young adult deaths
16-4. Maternal deaths
16-5. Maternal illness and complications due to pregnancy
16-6. Prenatal care
16-14. Developmental disabilities
16-15. Prenatal substance exposure
16-16. Fetal alcohol syndrome
16-19. Breastfeeding
16-22. Medical home for children with special health care needs
16-23. Service systems for children with special health care needs

20. Occupational Safety and Health

20-5. Work-related homicides
20-6. Work-related assaults
20-7. Elevated blood lead levels from work exposure
20-10. Worksite stress reduction programs

23. Public Health Infrastructure

23-1. Public health employee access to Internet
23-2. Public access to information and surveillance data
23-3. Use of geocoding in health data systems
23-4. Data for all population groups
23-5. Data for Leading Health Indicators, Health Status Indicators, and Priority Data Needs at Tribal, State, and local levels
23-6. National tracking of Healthy People 2010 objectives
23-7. Timely release of data on objectives
23-8. Competencies for public health workers
23-9. Training in essential public health services
23-10. Continuing education and training by public health agencies
23-11. Performance standards for essential public health services
23-12. Health improvement plans
23-13. Access to public health laboratory services
23-14. Access to epidemiology services
23-16 Data on public health expenditures
23-17 Prevention research

25. Sexually Transmitted Diseases

25-3. Primary and secondary syphilis
25-8. Heterosexually transmitted HIV infection in women
25-9. Congenital syphilis
25-10. Neonatal STDs
25-11. Responsible adolescent sexual behavior
25-12. Responsible sexual behavior messages on television
25-14. Screening in youth detention facilities and jails
25-15. Contracts to treat nonplan partners of STD patients
25-17. Screening of pregnant women
25-18. Compliance with recognized STD treatment standards
25-19. Provider referral services for sex partners

26. Substance Abuse

26-7. Alcohol- and drug-related violence
26-8. Lost productivity
26-9. Substance-free youth
26-10. Adolescent and adult use of illicit substances
26-11. Binge drinking
26-12. Average annual alcohol consumption
26-13. Low-risk drinking among adults
26-14. Steroid use among adolescents
26-15. Inhalant use among adolescents
26-16. Peer disapproval of substance abuse
26-17. Perception of risk associated with substance abuse
26-18. Treatment gap for illicit drugs
26-22. Hospital emergency department referrals
26-23. Community partnerships and coalitions

(A listing of all abbreviations and acronyms used in this publication appears in Appendix K.)

Anxiety Disorders: Anxiety disorders have multiple physical and psychological symptoms, but all have in common feelings of apprehension, tension, or uneasiness. Among the anxiety disorders are panic disorder, agoraphobia, obsessive compulsive disorder, post-traumatic stress disorder, and generalized anxiety disorder.

Case management: Practice in which the service recipient is a partner in his or her recovery and self-management of mental illness and life.

Co-occurring/comorbidity: In general, the existence of two or more illnesses—whether physical or mental—at the same time in a single individual. In this chapter, comorbidity specifically means the existence of a mental illness and a substance abuse disorder or a mental and a physical illness in the same person at the same time.

Consumer: Any person using mental health services.

Cultural competence: In this chapter, a group of skills, attitudes, and knowledge that allows persons, organizations, and systems to work effectively with diverse racial, ethnic, and social groups.

Depression: Depression is a state of low mood that is described differently by people who experience it. Commonly described are feelings of sadness, despair, emptiness, or loss of interest or pleasure in nearly all things. Depression can also be experienced in other disorders, such as bipolar disorder (manic-depressive disorder).

Diagnosable mental illness: This term includes all people with a mental illness in a specified population group, whether or not they have received a formal diagnosis from a medical or mental health professional.

Homeless: A person who lacks housing. The definition also includes a person living in transitional housing or a person who spends most nights in a supervised public or private facility providing temporary living quarters.

Juvenile justice facility: Includes detention centers, shelters, reception or diagnostic centers, training schools, ranches, forestry camps or farms, halfway houses and group homes, and residential treatment centers for young offenders.

Mental health services: Diagnostic, treatment, and preventive care that helps improve how persons with mental illness feel both physically and emotionally as well as how they interact with other persons. These services also help persons who have a strong risk of developing a mental illness.

Mental illness: The term that refers collectively to all diagnosable mental disorders. *Mental disorders* are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof), that are all mediated by the brain and associated with distress and/or impaired functioning. Mental disorders spawn a host of human problems that may include personal distress, impaired functioning and disability, pain, or death. These disorders can occur in men and women of any age and in all races and ethnic groups. They can be the result of family history, genetics, or other biological, environmental, social, or behavioral factors that occur alone or in combination.

Resilience: Manifested competence in the context of significant challenges to adaptation or development.

Schizophrenia: A mental disorder lasting for at least 6 months, including at least 1 month with two or more active-phase symptoms. Active phase symptoms include delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, and other symptoms. Schizophrenia is accompanied by marked impairment in social or occupational functioning.

Screening for mental health problems: A brief formal or informal assessment to identify persons who have mental health problems or are likely to develop such problems. The screening process helps determine whether a person has a problem and, if so, the most appropriate mental health services for that person.

Serious emotional disturbance (SED): A diagnosable mental disorder found in persons from birth to 18 years of age that is so severe and long lasting that it seriously interferes with functioning in family, school, community, or other major life activities.

Serious mental illness (SMI): A diagnosable mental disorder found in persons aged 18 years and older that is so long lasting and severe that it seriously interferes with a person's ability to take part in major life activities.

References

1. Murray, C.J.L., and Lopez, A.D. The Global Burden of Disease. Cambridge, MA: Harvard University Press, 1996.

2. Regier, D.A.; Narrow, W.; Rae, D.S. Unpublished NIMH analyses, 1999.

3. Regier, D.A.; Narrow, W.; Rae, D.S.; et al. The de facto U.S. mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry* 50:85-94, 1993.

4. Kessler, R.C.; McGonagle, K.A.; Zhao, S.; et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the U.S. *Archives of General Psychiatry* 51:8-19, 1994.

5. Shaffer, D.; Fisher, P.; Dulcan, M.K.; et al. The NIMH Diagnostic Interview Schedule for Children, version 2.3 (DSIC 2.3): Description, acceptability, prevalence rates and performance in the MECA study. Methods for the Epidemiology of Child and Adolescent Mental Disorders Study. *Journal of the American Academy of Child and Adolescent Psychiatry* 35:865-877, 1996.

6. Brandenberg, N.; Friedman, R.; and Silver, S. The epidemiology of childhood psychiatric disorders: Prevalence findings from recent studies. *Journal of the American Academy of Child and Adolescent Psychiatry* 29:76-83, 1990.

7. Taylor, E.; Chadwick, O.; Heptinstall, E; et al. Hyperactivity and conduct problems as risk factors for adolescent development. *Journal of the American Academy of Child and Adolescent Psychiatry* 35:1213-1226, 1996.

8. Foley, H.A.; Carlton, C.O.; and Howell, R.J. The relationship of attention deficit hyperactivity disorder and conduct disorders to juvenile delinquency: Legal implications. *Bulletin of the American Academy of Psychiatry Law* 24:333-345, 1996.

9. Friedman, R.M.; Katz-Levey, J.W.; Manderschied, R.W.; and Sondheimer, D.L. Prevalence of serious emotional disturbance in children and adolescents. In: Manderscheid, R.W., and Sonnenschein, M.A. (eds.). *Mental Health, United States, 1996*. Rockville, MD: Center for Mental Health Services, 1996, 71-78.

10. Ritchie, K., and Kildea, D. Is senile dementia "age-related" or "ageing related"?—evidence from meta analysis of dementia prevalence in the oldest old. *Lancet* 346:931-934, 1995.

11. Lebowitz, B.D.; Pearson, J.L.; and Cohen, G.D. Clinical geriatric psychopharmacology. Baltimore, MD: Williams & Wilkins, 1998.

12. Robins, L.N.; Locke, B.Z.; and Regier, D.A. An overview of psychiatric disorders in America. In: Robins, L.N., and Regier, D.A. (eds.). *Psychiatric Disorders in America: The Epidemiologic Catchment Area Study*. New York, NY: Free Press, 1991.

13. National Advisory Mental Health Council. Health care reform for Americans with severe mental illnesses: Report of the National Advisory Mental Health Council. *American Journal of Psychiatry* 150:1447-1465, 1993.

14. Kessler, R.C.; Berglund, P.A.; Zhao, S.; et al. The 12-month prevalence and correlates of serious mental illness. In: *Mental Health, United States, 1996.* (DHHS Publication No. (SMA) 96-3098). Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, 1996.

15. National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). *Prevalence of Chronic Circulatory Conditions: Vital and Health Statistics*, Series No. 10(94). DHEW Pub. No. NRA 75-1521. Hyattsville, MD: National Center for Health Statistics, 1992.

16. Howard, K.I.; Cornille, T.A.; Lyons, J.S.; et al. Patterns of mental health service utilization. *Archives of General Psychiatry* 53:696-703, 1996.

17. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration and National Institutes of Health. *Mental Health: A Report of the Surgeon General*, 1999.

18. Frese, F.J. Advocacy, recovery, and the challenges of consumerism for schizo-

phrenia. *Psychiatric Clinics of North America* 21:233-249, 1998.

19. Regier, D.A.; Farmer, M.E.; Rae, D.S.; et al. Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) Study. *Journal of the American Medical Association* 264:2511-2518, 1990.

20. Interagency Council on the Homeless. *Outcasts on Main Street.* HHS Pub. No. ADM 92-1904. Rockville MD: Alcohol, Drug Abuse, and Mental Health Services Administration, 1992.

21. Kessler, R.C.; Nelson, C.B.; McGonagle, K.A.; et al. The epidemiology of co-occurring addictive and mental disorders: Implications for prevention and service utilization. *American Journal of Orthopsychiatry* 66:21-23, 1996.

22. Winkle, M. A retrospective measure of childhood behavior problems and its use in predicting adolescent problem behaviors. *Journal of Studies in Alcohol* 54:421-422, 1993.

23. Christie, K.A.; Burke, Jr., J.D.; Regier, D.A.; et al. Epidemiologic evidence for early onset of mental disorders and higher risk of drug abuse in young adults. *American Journal of Psychiatry* 145:971-975, 1988.

24. Weissman, M.M., and Klerman, J.K. Depression: Current understanding and changing trends. *Annual Review of Public Health* 13:319-339, 1992.

25. American Psychiatric Association. Practice guidelines for the treatment of patients with panic disorder. *American Journal of Psychiatry* 155(suppl.12):1-34, 1998.

26. Brawman-Mintzer, O., and Lydiard, R.B. Generalized anxiety disorder: Issues in epidemiology. *Journal of Clinical Psychiatry* 57(suppl.7):3-8, 1996.

27. Regier, D.A.; Farmer, M.E.; Rae, D.S.; Myers, J.K.; Kramer, M.; Robins, L.N.; George, L.K.; Karno, M.; and Locke, B.Z. One-month prevalence of mental disorders in the United States and sociodemographic characteristics: the Epidemiologic Catchment Area study. *Acta Psychiatrica Scandinavia* 88, 35-47, 1993.

28. Van der Kolk, B.A., and Perry, J.L. Childhood origins of self-destructive behavior. *American Journal of Psychiatry* 148:1665-1671, 1991.

29. NCHS, CDC. *Vital Statistics of the United States*, Tables 1-9. Hyattsville, MD: National Center for Health Statistics, 1991.

30. Moscicki, E.K. Gender differences in completed and attempted suicide. *Annals of Epidemiology* 4:152-158, 1994.

31. Centers for Disease Control and Prevention. Retrieved May 25, 1999. <www.cdc.gov/ncipc/osp/mortdata.htm>

32. National Center for Health Statistics, Centers for Disease Control and Prevention (CDC). Vital Statistics of the United States, Tables 1-9. Washington, DC: U.S. Government Printing Office, 1991.

33. Herzog, D.B., and Copeland, P.N. Medical progress: Eating disorders. *New England Journal of Medicine* 313:295-303, 1985.

34. CDC. *Priorities for Women's Health*. Atlanta GA: the Centers, 1993.

35. McIntosh, J.L., Pearson, J.L., and Lebowitz, B.D. Mental disorders of elderly men. In: Kosberg, J.I., and Kaye, L.W. (eds.). *Elderly Men: Special Problems and Professional Challenges*. New York, NY: Springer Publishing Company, 1997, 193-215.

36. Weissman, M.M.; Bruce, M.L.; Leaf, P.J.; Florio, L.P.; and Holzer, C.E. Affective disorders. In: Robbins, L.N., and Regier, D.A. (eds.). *Psychiatric Disorders in America*. New York, NY: Free Press, 1991, 53-80.

37. Koening, H.G., and Blazer, D.G. Mood disorders and suicide. In: Birren, J.E.; Sloane, R.B.; and Cohen, G.D. (eds.). *Handbook of Mental Health and Aging,* 2nd ed. San Diego, CA: Academic Press, 1992, 379-407.

38. National Institutes of Health Consensus Development Panel on Depression in Late Life. Diagnosis and treatment of depression in late life. *Journal of the American Medical Association* 268:1018-1024, 1992.

39. Evans, D.A.; Funkstien, H.H.; Albert, M.S.; Scherr, P.A.; Cook, N.R.; Chown, M.J.; Hubert, L.E.; Hennekens, C.H.; and Taylor, J.D. Prevalence of Alzheimer's disease in a community population of older persons: Higher than previously reported. *Journal of the American Medical Association* 262:2551-2556, 1989.

40. Jorm, A.F.; Korten, A.E.; and Henderson, A.S. The prevalence of dementia: A quantitative integration of the literature. *Acta Psychiatrica Scandinavia* 76:465-479, 1987.

41. Zubenko, G.S.; Mulsant, B.H.; Sweet, R.A.; et al. Mortality of elderly patients with psychiatric disorders. *American Journal of Psychiatry* 154(10):1360-1368, 1997.

42. Myers, J.K.; Weissman, M.M.; Tischler, G.L.; Holzer, C.E.; Leaf, P.J.; Orvaschel, H.; Anthony, J.C.; Boyd, J.H.;

Burke, J.D.; Kramer, M.; and Stoltzman, R. Six month prevalence of psychiatric disorders in three communities. *Archives of General Psychiatry* 41:959-967, 1984.

43. Moscicki, E.K.; O'Carroll, P.; Rae, D.S.; Locke, B.Z.; Roy, A.; and Regier, D.A. Suicide attempts in the Epidemiologic Catchment Area study. *The Yale Journal of Biology and Medicine* 61:259-268, 1998.

44. CDC. Suicide among older persons—United States, 1980-1992. *Morbidity and Mortality Weekly Report* 45(1):3-6, 1996.

45. CDC. Suicide Deaths and Rates Per 100,000. Retrieved November 23, 1999 <www.cdc.gov/ncipc/data/us9794/Suic.htm>.

46. CDC. Health Related Quality of Life and Activity Limitation: Eight States, 1995. *Morbidity and Mortality Weekly Report* (47):134-140, 1998.

47. Montano, C.B. Recognition and treatment of depression in a primary care setting. *Journal of Clinical Psychiatry* 55:18-34, 1994.

48. NCHS, CDC. *Health United States, 1996*. Hyattsville, MD: Public Health Service, 1997.

49. National Institute of Mental Health Suicide Research Consortium. *Suicide Facts*. Rockville, MD: National Institute of Mental Health, 1997.

50. CDC. Ten leading causes of death by age group, 1996. [Online]. Retrieved November 23, 1999. <www.cdc.gov/ncipc/osp/leadcaus/101c96.htm>

51. Tessler, R., and Dennis, D. *A Synthesis of NIMH-Funded Research Concerning Persons Who Are Homeless and Mentally Ill.* DHHS Pub. No. 94-303014. Rockville MD: National Institute of Mental Health, 1989.

52. Lam, J.A., and Rosenheck, R. Street outreach for homeless persons with serious mental illness: Is it effective? *Medical Care* 37:894-907, 1999.

53. Lehman, A., and Codray, D. Prevalence of alcohol, drug, and mental disorders among the homeless: One more time. *Contemporary Drug Problems* 20:355-383, 1993.

54. Bell, M.D., and Lysaker, P.H. Clinical benefits of paid work activity in schizophrenia: 1-year follow up. *Schizophrenia Bulletin* 23:317-328, 1997.

55. Arns, P.G., and Linney, J.A. Work, self, and life satisfaction for persons with severe and persistent mental disorders. *Psychosocial Rehabilitation Journal* 17:63-79, 1993.

56. Fabian, E. Supported employment and the quality of life: Does a job make a difference? *Rehabilitation Counseling Bulletin* 2:84-87, 1992.

57. Rogers, E.S.; Sciarappa, K.; and MacDonald, W.K. A benefit-cost analysis of a supported employment model for persons with psychiatric disability. *Evaluation and Program Planning* 18:105-115,1995.

58. Herzog, D.B., and Copeland, P.N. Medical progress: Eating disorders. *New England Journal of Medicine* 313:295-303, 1985.

59. Eckert, E.D.; Halmi, K.A.; Marchi, P.; Grove, W.; and Crosby, R. Ten-year follow-up of anorexia nervosa: Clinical course and outcome. *Psychological Medicine* 25:143-156, 1995.

60. Strober, M.; Freeman, R.; and Morrell, W. The long-term course of severe anorexia nervosa in adolescents. Survival analysis of recovery, relapse, and outcome predictors over 10-15 years in a prospective study. *International Journal of Eating Disorders* 22:339-360, 1997.

61. Pike, K.M. Long-term course of anorexia nervosa: Response, relapse, remission, and recovery. *Clinical Psychology Review* 18:447-475, 1998.

62. Field, A.E.; Herzog, D.B.; Keller, M.B.; West, J.; Nussbaum, K.; and Colditz, G.A. Distinguishing recovery from remission in a cohort of bulimic women: How should asymptomatic periods be described. *Journal of Clinical Epidemiology* 50:1339-1345, 1997.

63. Keel, P.K., and Mitchell, J.E. Outcome of bulimia nervosa. *American Journal of Psychiatry* 154:313-321, 1997.

64. Greenberg, M.T.; Domitrovich, C.; and Bumbarger, B. *Preventing Mental Disorders in School-Aged Children: A Review of the Effectiveness of Prevention Programs.* Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, May 1999.

65. Woodruff, D.S.; Osher, D.; Hoffman, C.C.; et al. The role of education in a system of care: Effectively serving children with emotional or behavioral disorders. In: *Systems of Care: Promising Practices in Children's Mental Health, 1998 Series, Volume III.* Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration,

Center for Mental Health Services, 1999.

66. Otto, R.K. Prevalence of mental disorders among youth in the juvenile justice system. In: *Responding to the Mental Health Needs of Youth in the Juvenile Justice System.* Washington, DC: The National Coalition for the Mentally Ill in the Criminal Justice System, 1992.

67. Blazer, D., and Williams, C.D. Epidemiology of dysphoria and depression in an elderly population. *American Journal of Psychiatry* 137:439-444, 1980.

68. Cocozza, J.J. Identifying the needs of juveniles with co-occurring disorders. *Corrections Today,* December 1997.

68. Wohlfarth, T.D.; Brink, W.V.D.; Ormel, J.; Koeter, M.W.J.; and Oldehinkel, T.J. The relationship between social disfunctioning and psychopathology among primary care attenders*. British Journal of Psychiatry* 163:37-44, 1993.

69. Wells, K.; Stewart, A.; Hays, R.; Burnam, M.; Rogers, W.; Daniels, M.; Berry, S.; Greenfield, S.; and Ware, J. The functioning and well-being of depressed patients: Results from the Medical Outcomes Study. *Journal of the American Medical Association* 262:914-919, 1989.

70. Dohrenwend, B.S.; Dohrenwend, B.P.; Link, B.; and Levav, I. Social functioning of psychiatric patients in contrast with community cases in the general population. *Archives of General Psychiatry* 40:1174-1182, 1983.

71. Moscicki, E.K. Identification of suicide risk factors using epidemiologic studies. *Psychiatric Clinics of North America* September, 20:3, 499-517, 1997.

72. National Institute of Mental Health. Depression Facts, 1999. Retrieved November 23, 1999 <http://www.nimh.nih.gov/depression/index.htm>.

73. Greenberg, P.E.; Stiglin, L.E.; Finkelstein, S.N.; et al. The economic burden of depression. *Journal of Clinical Psychiatry* 54:425-426, 1993.

73. Katon, W.J. Will improving detection of depression in primary care lead to improved depressive outcomes? *General Hospital Psychiatry* 17:1-2, 1995.

74. Fabian, E. Supported employment and the quality of life: Does a job make a difference? *Rehabilitation Counseling Bulletin* 2:84-87, 1992.

75. Hafner, H., and an der Heiden, W. Epidemiology of Schizophrenia. *Canadian Journal of Psychiatry* 42:139-151, 1997.

76. Weissman, M.M.; Bland, R.C.; Canino, G.J.; et al. The cross-national epidemiology of panic disorder. *Archives of General Psychiatry* 54:305-309, 1997.

77. Magee, W.J.; Eaton, W.W.; Wittchen, H.U.; McGonagle, K.A.; and Kessler, R.C. Agoraphobia, simple phobia, and social phobia in the National Comorbidity Survey. *Archives of General Psychiatry* 53:159-168, 1996.

78. Goldberg D.P., and Lecrubier Y. Form and frequency of mental disorders across centres. In: Ustun T.B., and Sartorius, N. (eds.). *Mental illness in general health care: An international study.* New York: John Wiley & Sons, 1995, 323-334.

79. Liebowitz, M.R. Panic disorder as a chronic illness. *Journal of Clinical Psychiatry* 58(suppl.)13:5-8, 1997.

80. Gorman, J.M., and Coplan, J.D. Comorbidity of depression and panic disorder. *Journal of Clinical Psychiatry* 57(suppl.10):34-41, 42-43, 1996.

81. Keller, M.B., and Hanks, D.L. The natural history and heterogeneity of depressive disorders: implications for rational antidepressant therapy. *Journal of Clinical Psychiatry* 55(suppl.A):25-31; discussion 32-3, 98-100, 1994.

82. Marcus, S.C.; Olfson, M.; Pincus, H.A.; Shear, M.K.; and Zarin, D.A. Self-reported anxiety, general medical conditions, and disability bed days. *American Journal of Psychiatry* 154:1766-1768, 1997.

83. Hornig, C.D., and McNally, R.J. Panic disorder and suicide attempt. A reanalysis of data from the Epidemiologic Catchment Area study. *British Journal of Psychiatry* 167:76-79, 1995.

84. Morris, S.M.; Steadman, H.J.; Veysey, B.M. Mental health services in United States jails: A Survey of Innovative Practices. *Criminal Justice and Behavior* 24:3-19, 1997.

85. Steadman, H.J.; Morris, S.M.; and Dennis, D. The diversion of mentally ill persons from jails to community-based services: A profile of programs. *American Journal of Public Health* 12:1630-1635, 1995.

86. KPMG Peat Marwick LLP and Northwestern University. New Voices: *Consumerism in Health Care,* 1998.

87. Davis, K. *Exploring the Intersection Between Cultural Competency and Managed Behavioral Care Policy Implications for State and County Mental Health Agencies.* Alexandria, GA: National Technical Assistance Center for State Mental

Health Planning (NTAC), 1997.

88. Lefley, H.P. Culture and chronic mental illness. *Hospital and Community Psychiatry* 41:277-286, 1990.

89. Munoz, F.U., and Endo, R., (eds*.). Perspectives on Minority Group Mental Health.* Washington, DC: University Press of America, 1982.

90. Martinez, K. Cultural sensitivity in family therapy gone awry. *Hispanic Journal of Behavioral Sciences* 16:75-89, 1994.

91. Mason, J.L. Developing culturally competent organizations. Focal Point: *The Bulletin of Research and Training Center on Family Support and Children's Mental Health* 8:1-8, 1994.

92. Miller, S.O.; O'Neal, G.S.; and Scott, C.A., (eds.). *Primary Prevention Approaches to the Development of Mental Health Services for Ethnic Minorities: Challenges to Social Work Education and Practice*. New York, NY: Council on Social Work Education.

93. Snowden, L., and Hoschuh, J. Ethnic differences in emergency psychiatric care and hospitalization in a program for the severely mentally ill. *Community Mental Health Journal* 28, 1992.

94. Snowden, L., and Cheung, F. Use of inpatient services by members of ethnic groups. *American Psychologist* 45:347-355, 1990.

95. Schffler, R.M., and Miller, A.B. Demand analysis of service use among ethnic subpopulations. *Inquiry* 26:202-215, 1989.

96. Manderscheid, R.W., and Sonnenschein, M.A. *Mental Health, United States 1985.* Rockville, MD: National Institute of Mental Health, 1987.

97. Blazer, D., and Williams, C.D. The epidemiology of dysphoria and depression in an elderly population. *American Journal of Psychiatry* 137:439-444, 1990.